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10/590,462

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Michael Boll

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EXAMINER

OLSON, ERIC

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,462	Applicant(s) BOLL ET AL.	
	Examiner ERIC S. OLSON	Art Unit 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,24-84,86 and 87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 79-84,86 and 87 is/are allowed.
- 6) ☒ Claim(s) 1,24-35,37,42,50,52,53,55,60 and 62-78 is/are rejected.
- 7) ☒ Claim(s) 36,38-41,43-49,51,54,56-59 and 61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

This office action is a response to applicant's communication submitted March 12, 2010 wherein claims 1, 24-26, 28-31, 34, 36, 43, 44, 51, 54-56, 59-61, 64, 70-78, and 81-84 are amended and claim 85 is cancelled. This application is a national stage application of PCT/EP05/50877, filed March 1, 2005, which claims priority to foreign application EP04100813.7, filed March 1, 2004.

Claims 1, 24-84, 86, and 87 are pending in this application.

Claims 1, 24-84, 86, and 87 as amended are examined on the merits herein.

Applicant's amendment, submitted March 12, 2010, cancelling claim 85, has been fully considered and found to be persuasive to remove the objection to claim 85 for being a substantial duplicate of claim 83. Therefore the objection is withdrawn.

Applicant's amendment, submitted March 12, 2010, correcting grammatical errors in claims 31 and 35, has been fully considered and found to be persuasive to remove the objection to these claims. Therefore the objection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claims 70-78 under 35 USC 101 for reciting a use without setting forth process steps, has been fully considered and found to be persuasive to remove the rejection as the claims have been amended to claim methods comprising process steps. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claims 24-26, 28-33, 36, 44, 54, 64, 74, 75, and 82-85 under 35 USC 112, second paragraph, for reciting broad limitations followed by narrow limitations, has been fully considered and found to be persuasive to remove the rejection as the claims have been amended to remove the narrow limitations. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claims 70-78 under 35 USC 112, second paragraph, for failing to recite method steps, has been fully considered and found to be persuasive to remove the rejection as the claims have been amended to recite clear method steps. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claims 55, 56, and 61 under 35 USC 112, second paragraph, for reciting a method comprising a physical ingredient, has been fully considered and found to be persuasive to remove the rejection as the claims have been amended to specify that it is the pharmaceutical formulation used in the method which comprises the additional ingredient. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claim 60 under 35 USC 112, second paragraph, for reciting an ambiguous

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limitation that may or may not add an additional method step, has been fully considered and found to be persuasive to remove the rejection as the claim has been amended to clearly add an additional method step. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claim 59 under 35 USC 112, second paragraph, for reciting an ambiguous limitation that may or may not add an additional method step, has been fully considered and found to be persuasive to remove the rejection as the claim has been amended to clearly add an additional method step. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claims 43, 51, 61, 81, and 87 under 35 USC 112, first paragraph, for lacking enablement for compositions comprising all possible pharmaceutical agents, has been fully considered and found to be persuasive to remove the rejection as the claim has been amended to specify that the additional ingredient is selected from a narrow list of common physiological salts. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claims 35, 37-39, 41, 45-47, 49-51, 53, 55-57, and 79-87 under 35 USC 103(a) for being obvious over Sommermeyer et al. in view of Lederman et al., has been fully considered and found to be persuasive to remove the rejection as an antibody

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conjugate as described by Lederman et al. cannot be a formulation for the specific uses described by the claims as amended. Therefore the rejection is withdrawn.

Applicant's amendment, submitted March 12, 2010, with respect to the rejection of instant claims 35, 37-39, 41, 45-47, 49-51, 53, 55-57, and 79-87 under 35 USC 103(a) for being obvious over Sommermeyer et al. in view of Lederman et al. in view of Haisma et al., has been fully considered and found to be persuasive to remove the rejection as an antibody conjugate as described by Lederman et al. cannot be a formulation for the specific uses described by the claims as amended. Therefore the rejection is withdrawn.

The following rejections of record in the previous action are maintained:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 37, 55, and 75 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10

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USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, the claims recite the broad recitation "comprises sodium chloride" for example, and the claims also recite "preferably in a concentration of 0.9%" which is the narrower statement of the range/limitation.

Response to Arguments: Neither the amendment submitted March 12, 2010 nor the arguments included therein address this ground of rejection. Claims 37, 55, and 75 as they currently stand still recite a broad limitation followed by a narrow limitation. Therefore the rejection is maintained.

Claim 64 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim refers to the molar ratio of hydroxyethylating agent to starch, but does not make clear whether the molar ratio is per mole of starch molecule or per mole of glucose subunit within the starch. Therefore the claim is indefinite.

Response to Arguments: Neither the amendment submitted March 12, 2010 nor the arguments included therein address this ground of rejection. Claim 64 as it currently stands still fails to specify whether the ratio is to moles of starch molecules or glucose subunits. Therefore the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 24-34, 42, 52, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sommermeyer et al. (US patent 7285661, cited in PTO-892, first

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published on August 28, 2003 as PCT international publication WO03/070722, reference included with PTO-892)

Sommermeier et al. discloses conjugates of oxidized substituted or unsubstituted starch radicals with drugs. (column 2 lines 19-51) This conjugation extends the half-life of the drug in serum by preventing passage across the kidney barrier. (column 2 lines 55-60) Preferred starches are hydroxyethyl starches, particularly those prepared from waxy starch including waxy maize. (column 3 lines 1-8) The preferred degree of substitution is 0.1-0.8. (column 3 lines 37-40) The preferred C_2/C_6 ratio is between 3 and 11. (column 4 lines 1-5) The preferred molecular weight is between 2000-1000000 Da. (column 4 lines 39-44) These hydroxyethyl starches are preferably prepared by the method of EP0402724. (column 3 lines 51-55) The active substance to which the starch is conjugated contains an -SH group and is preferably a peptide, protein, antibiotic, nucleic acid, or hormone. (column 5 lines 9-58) The composition can be prepared as a drug containing standard pharmaceutical accessory agents. (column 7 lines 55-60) Sommermeier et al. does not specifically disclose starches having the exact molecular weight, degree of substitution, and C_2/C_6 ratio recited in the instant claims.

It would have been obvious to one of ordinary skill in the art at the time of the invention to prepare the conjugates and compositions of Sommermeier et al. having the molecular weight, degree of substitution, and C_2/C_6 ratio recited in the instant claims. The claimed ranges overlap or fall within the ranges disclosed in the prior art. One of ordinary skill in the art would have been able to arrive at the claimed ranges through a

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process of optimizing these result-effective variables within the broad disclosure of the prior art.

Therefore the invention taken as a whole is *prima facie* obvious.

Response to Arguments: Applicant's arguments, submitted March 12, 2010, with respect to the above grounds of rejection, have been fully considered and not found to be persuasive to remove the rejection. Applicant argues that the chemically altered starches described by Sommermeyer et al. are different from the hydroxyethyl starches for use as a volume replacement recited in the instant claims. However, in addition to oxidized or conjugated starches, Sommermeyer et al. discloses a method for making these starches, which begins by oxidizing the unmodified starch starting material. This starting material is an unmodified hydroxyalkyl starch having the same molecular weight, degree of substitution, and C2/C6 ratio as the final product. Furthermore, an unmodified starch having these characteristics would have the same potential utility for volume replacement as described in the instant claims, as this starch material could potentially be used as a volume replacement. Whether or not this property is explicitly recognized by the prior art has no bearing on whether it falls within the claim limitations.

Applicant further argues that the reference EP '724 cited by Sommermeyer for providing a method for making hydroxyethyl starch, teaches a different molecular weight, degree of substitution, and C2/C6 ratio than that recited in the claims, and that therefore one of ordinary skill in the art would not have made the claimed starches based on this reference. However, while EP '724 is relied upon by Sommermeyer et al. for a general method of making hydroxyethylated starch, and not intended to teach each

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and every limitation of the particular starch being made by the process. In particular, EP '724 teaches a different use for the hydroxyethylated starch. One of ordinary skill in the art reading the disclosure of Sommermeyer et al. would note the preferred ranges for the degree of substitution, C2/C6 ratio, and molecular weight recited in column 3 lines 37-40 and column 4 lines 1-5 and 39-44 of Sommermeyer et al. and adapt the method of EP '724 to arrive at a starch having these characteristics, which are optimized for using the starch as a conjugate with an active agent as described by Sommermeyer et al. While EP '724 does teach that different values of these variables are desirable for a starch intended to be used as a volume replacement of plasma expander, Sommermeyer et al. clearly envisions a different use for this starch and therefore would motivate one of ordinary skill in the art to use different values for these variables. Thus, in view of the teaching of a CC2/C6 range of 8-20 in EP '724 and of 2-12 in Sommermeyer et al., one of ordinary skill in the art would recognize that the range of 2-12 from Sommermeyer et al is relevant to the disclosed use and the range of 8-20 disclosed by EP '724 is not relevant to a hydroxyethyl starch that is to be used for a purpose other than as a plasma expander or volume replacement. According to MPEP 2144, the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. >See, e.g., *In re Kahn*, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (motivation question arises in the context of the general problem confronting the inventor rather than the specific problem solved by the

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invention); Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1323, 76 USPQ2d 1662, 1685 (Fed. Cir. 2005) ("One of ordinary skill in the art need not see the identical problem addressed in a prior art reference to be motivated to apply its teachings."); In re Linter, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972) (discussed below); In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990), cert. denied, 500 U.S. 904 (1991)

Applicant further argues that there is no suggestion in the reference that the characteristics described by Sommermeyer et al. would be desirable for an isolated HES compound. However, the instant claims are drawn to a chemical compound, not to a method of using the chemical compound. The mere fact that practicing the invention of Sommermeyer et al. would result in the production of an intermediate (non-oxidized HES) that falls within the claims is enough to render the claims obvious, whether or not the starch is eventually used in a solution for volume replacement (as in the instant specification) or is later oxidized and conjugated to an active agent. (as in the disclosure of Sommermeyer et al.)

Applicant further argues that there is no rationale as to why one of ordinary skill in the art would have been motivated to remove the starch of Sommermeyer et al. from the bonded active agent, reduce it, and use it as a plasma expander or volume replacement. No such rationale is necessary as the claims are directed toward compounds having certain potential uses, not methods of actually using these compounds for these specific purposes. A compound claim is not a method claim, and

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potential uses recited in the preamble do not serve to distinguish a compound claim from an identical compound used for a different purpose.

In short, one of ordinary skill in the art would have selectively ignored the teaching of a chemically unaltered HES for use as a plasma expander in EP '724 because this teaching, as opposed to the generic teaching of a method of making HES compounds, is directed to HES compounds suitable for a specific purpose that is different from that disclosed by Sommermeyer et al.

Regarding claim 34, this claim is directed to a pharmaceutical formulation comprising a hydroxyethyl starch, with certain intended uses listed. As the claim discloses no additional structural features of the composition beyond the presence of the starch, the starch in isolated form, or in a reaction mixture, is reasonably considered to be a pharmaceutical formulation according to the claim. Additionally, all arguments made previously with respect to the compound claim 1 and its dependent claims apply equally to claim 34.

Therefore the rejection is deemed proper and maintained.

Claims 62-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sommermeyer et al. as applied to claims 1, 24-34, 42, 43, 52, 60, and 61 above, and further in view of US patent 5218108. (of record in previous action, herein referred to as '108)

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The disclosure of Sommermeyer et al. is discussed above. Sommermeyer et al. does not disclose a process of making the claimed starch comprising the steps of claims 62-64 and 66-69.

'108 discloses a method of hydroxyethylating starch comprising suspending a starch in water at 30% suspension with a hydroxyethylating agent and 1N sodium hydroxide, hydrolyzing the hydroxyethylated starch with acid, and purification by filtration and ultrafiltration. (column 4 lines 21-39) Note that a 30% suspension of starch in water will contain about 1.85M of glucose units. Therefore 1N of NaOH is clearly a ratio of alkalizing agent to starch of 0.54, which is greater than 0.2, if the ratio is taken to mean the ratio of alkalizing agent to glucose subunit. If the ratio is interpreted as being of alkalizing agent to entire starch molecule, the ratio would be even higher and would clearly be greater than 0.2 as well. It is also noted that '108 claims priority to foreign application DE3919729 which is the same as the publication EP0402724 cited by Sommermeyer as teaching a method of making hydroxyethyl starch suitable for use in the disclosed invention and included with Applicant's form PTO-1449.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the process of '182 to make a hydroxyethyl starch for use in the invention of Sommermeyer et al. One of ordinary skill in the art would have been motivated to make this starch because Sommermeyer et al. renders obvious a starch having the claimed properties as discussed above. One of ordinary skill in the art would have reasonably expected success because Sommermeyer et al. specifically refers to the priority application of '182 as teaching a method of making the disclosed starches.

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Regarding the sterilization step recited in instant claim 65, one of ordinary skill in the art would have been motivated to sterilize the hydroxyethyl starch because Sommermeyer et al. discloses that the conjugates are to be used as a drug. Sterilizing a pharmaceutical composition to render it suitable for therapeutic use is routine and predictable in the prior art.

Therefore the invention taken as a whole is *prima facie* obvious.

Response to Arguments: Applicant's arguments, submitted March 12, 2010, with respect to the above grounds of rejection, have been fully considered and not found to be persuasive to remove the rejection. Applicant's arguments are the same as those made with respect to Sommermeyer et al. alone, and are not found to be persuasive for the same reasons. Therefore the rejection is maintained.

Applicant's amendment necessitates the following new grounds of rejection:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 70-78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are directed to a method for achieving various treatment objectives comprising introducing a pharmaceutical formulation in a treatment process. However the claims do not specify who or what is being treated by

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the treatment process or how the pharmaceutical formulation is introduced. Therefore the claims are indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 35, 50, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sommermeyer et al. as applied to claims 1, 24-34, 42, 50, 52, and 60 above, and further in view of US patent 6083909. (Cited in PTO-892, herein referred to as '909, equivalent to DE19628705 cited in the specification of Sommermeyer et al. above)

The disclosure of Sommermeyer et al. is discussed above. Sommermeyer et al. does not specifically disclose an aqueous solution or colloidal aqueous solution containing hydroxyethylstarch.

'909 discloses a method of making oxidized hydroxyethyl starch for conjugation to a protein. (column 8 lines 50-65) It is noted that this reference is equivalent to foreign application DE19628705 A1 cited by Sommermeyer et al. (column 8 line 1) as a suitable method for making an oxidized conjugate of hydroxyethyl starch. In the disclosed method the starch is taken up in deionized water. This process produces an aqueous solution of hydroxyethyl starch.

It would have been obvious to one of ordinary skill in the art at the time of the invention to oxidize hydroxyethyl starch for use in the invention of Sommermeyer et al. using the method described by '909, including taking up the hydroxyethyl starch in aqueous solution. One of ordinary skill in the art would have been motivated to do so because Sommermeyer et al. discloses a requirement for oxidized hydroxyethyl starch for the production of the starch conjugate. One of ordinary skill in the art would have reasonably expected success because Sommermeyer et al. specifically discloses the foreign priority application DE19628705 of '909 as being useful for the production of oxidized starch conjugates to use according to the invention of Sommermeyer et al.

Therefore the invention taken as a whole is *prima facie* obvious.

Conclusion

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Claims 1, 24-35, 37, 42, 50, 52, 53, 55, 60, and 62-78 are rejected. Claims 79-84, 86, and 87 are seen to be allowable. Claims 36, 38-41, 43-49, 51, 54, 56-59, and 61 are objected to for depending from a rejected base claim but would be allowable if rewritten in independent form incorporating all the limitations of the rejected base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC S. OLSON whose telephone number is (571)272-9051. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia Anna Jiang can be reached on (571)272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Eric S Olson/
Examiner, Art Unit 1623
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